IN THE SPECIFICATION

Please replace the following paragraphs:

Page 6, line 19 to page 6, line 26.

Therefore, a need exists to develop techniques for improving the efficiency of power conversion devices commonly used to provide power to portable IHS components. More specifically, a need exist to develop an efficient power conversion architecture that is less expensive and more reliable than such systems and methods heretofore available. Accordingly, it would be desirable to provide tools and techniques for integrating power conversion devices such as the AC-DC adapter 130 and the charger device 150 included in an IHS absent the disadvantages found in the prior methods and systems discussed above.

Page 8, line 3 to page 8, line 4.

FIG. 1, described above, illustrates a typical multi-tier power supply system operable to provide power to a load, according to the prior art[[;]].

Page 8, line 6 to page 8, line 7.

FIG. 2 illustrates a diagrammatic representation of an integrated power supply system used to provide power to a load, according to an embodiment[[;]].

Page 8, line 9 to page 8, line 10.

FIG. 3 illustrates more details of the integrated AC-DC adapter illustrated in FIG. 2, according to an embodiment[[;]].

Page 8, line 12 to page 8, line 13.

FIG. 4 illustrates a graph of the DC voltage output of the integrated AC-DC adapter tracking a battery stack voltage, according to an embodiment[[;]].

Page 8, line 15 to page 8, line 16.

FIG. 5 is a flow chart illustrating a method for converting an AC input to the DC voltage output, according to an embodiment[[; and]].

Page 9, line 4 to page 9, line 20.

In traditional, multi-tier, power conversion architecture the cumulative effect of the losses at each stage generally results in increasing the size and cost of the AC-DC adapter. Therefore, a need ~~exist~~ exists to develop an efficient power conversion architecture that is more efficient, occupies less board space in portable IHS and generates less heat. According to one embodiment, a system for converting an alternating current (AC) input to a direct current (DC) output includes an AC-DC adapter. The AC-DC adapter advantageously integrates the charging device to reduce the number of layers in the power conversion architecture. The integrated AC-DC module includes a rectifier module operable to receive the AC input and generate a first DC output and a buck converter module operable to receive the first DC output and generate the DC output responsive to a control signal. A controller module, also included in the AC-DC adapter, is operable to receive a first feedback

signal input indicative of a target voltage required by a load and a second feedback signal input indicative of the DC output to generate the control signal. The controller module adjusts the control signal responsive to the first and second feedback signal inputs so that the DC output is maintained to be within a predefined range of the target voltage.

Page 10, line 19 to page 11, line 2.

In one embodiment, an external feedback signal 215 is received from the battery 160. The feedback signal 215 is indicative of a target value for the DC voltage 119 output, which is sufficient to charge the battery 160. ~~Since~~ Because the battery stack voltage is dependent on the type and manufacturer of the battery 160, the battery stack voltage and the target value may vary. Further details of the target value relative to a battery stack voltage are illustrated in a graph in FIG. 4. The feedback signal 215 may be a single channel digital signal, an analog signal, a digital signal superimposed on a DC voltage, a pulse width modulated (PWM) signal, or an SMBus signal. In one embodiment, the integrated AC-DC adapter 210 receives the feedback signal 215 from the controller. In one embodiment, the AC-DC adapter 210 receives feedback signals from the controller and the battery 160 via the SMBus.

Page 12, line 27 to page 13, line 4.

During a charging phase 430 of the battery 160, a difference, deltaV, 420 between the DC voltage 119 output and the target voltage is always positive. Upon completion of the charging phase 430 such as at an end of charge 440 point, the battery stack voltage 410 is fully charged and the DC voltage 119 output is advantageously reduced to a predefined value to reduce the amount of heat

generated. The charging phase 430 is resumed when a relative state of charge (RSOC) of the battery 160 drops below a threshold level.